ABSTRACT

THESIS: Green Printing Technologies vs. Traditional Printing Technologies in Sheet-fed Offset Lithography: An Experiment in Quality

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This experimental study compares green printing technologies (ink and stock) to traditional printing technologies (ink and stock) regarding how they compare in quality. The quality was measured using the print characteristics of gray balance and dot gain. A comparison of the two independent variables (ink and stock) was conducted to determine if a difference exists for the selected characteristics. It has been suggested that the green technologies, despite being more environmentally friendly, are not as high in quality and therefore result in a lower quality printed piece. This research used a four-color test form that was printed using both the green and traditional technologies. The characteristics were measured using an X-rite 528 spectrodensitometer, after which the data were analyzed and conclusions reported. The results of the study suggest that there is no practical significance between the different inks and stocks employed in this study. It was determined however that the best print quality in terms of dot gain (meaning the least amount of dot gain) resulted from the combination of green technologies (ink and paper).